

WHAT WE CLAIM ARE:

1. A wet etching method comprising the steps of:
  - forming a silicon oxide film on one principal surface of a silicon substrate, and then forming a silicon nitride film on the silicon oxide film, a
  - 5 thickness  $T_O$  of said silicon oxide film and a thickness  $T_N$  of said silicon nitride film being set to have a film thickness ratio  $T_O/T_N$  of 1.25 or larger;
  - selectively etching a lamination layer of said silicon oxide film and said silicon nitride film to form an etching mask made of a left region of said lamination layer; and
  - 10 selectively and anisotropically etching said silicon substrate with alkali etchant by using said etching mask.
2. The wet etching method according to claim 1, wherein said film thickness ratio  $T_O/T_N$  is set in a range from 1.60 to 3.21.
- 15 3. A wet etching method comprising the steps of:
  - forming a silicon oxide film on one principal surface of a silicon substrate, and forming a silicon nitride film on the silicon oxide film;
  - selectively etching a lamination layer of said silicon oxide film and
  - 20 said silicon nitride film to form a mask opening through a partial region of said lamination layer and to form an etching mask made of a left region of said lamination layer;
  - after or before said etching mask is formed, forming at least one film stress relaxing groove partially in said silicon nitride film, said film stress
  - 25 relaxing groove relaxing film stress applied to said mask opening; and
  - selectively and anisotropically etching said silicon substrate with

alkali etchant by using said etching mask.

4. The wet etching method according to claim 3, wherein said at least one film stress relaxing groove is formed surrounding said mask opening.